



Broad Light

Evolution of Services Over Passive Optical Networks

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COO

March 2001



Agenda

- Objective
- Insight into APON
- Alternative solution for multi service provisioning over PON
- The msPON framing
- Summary



Objective

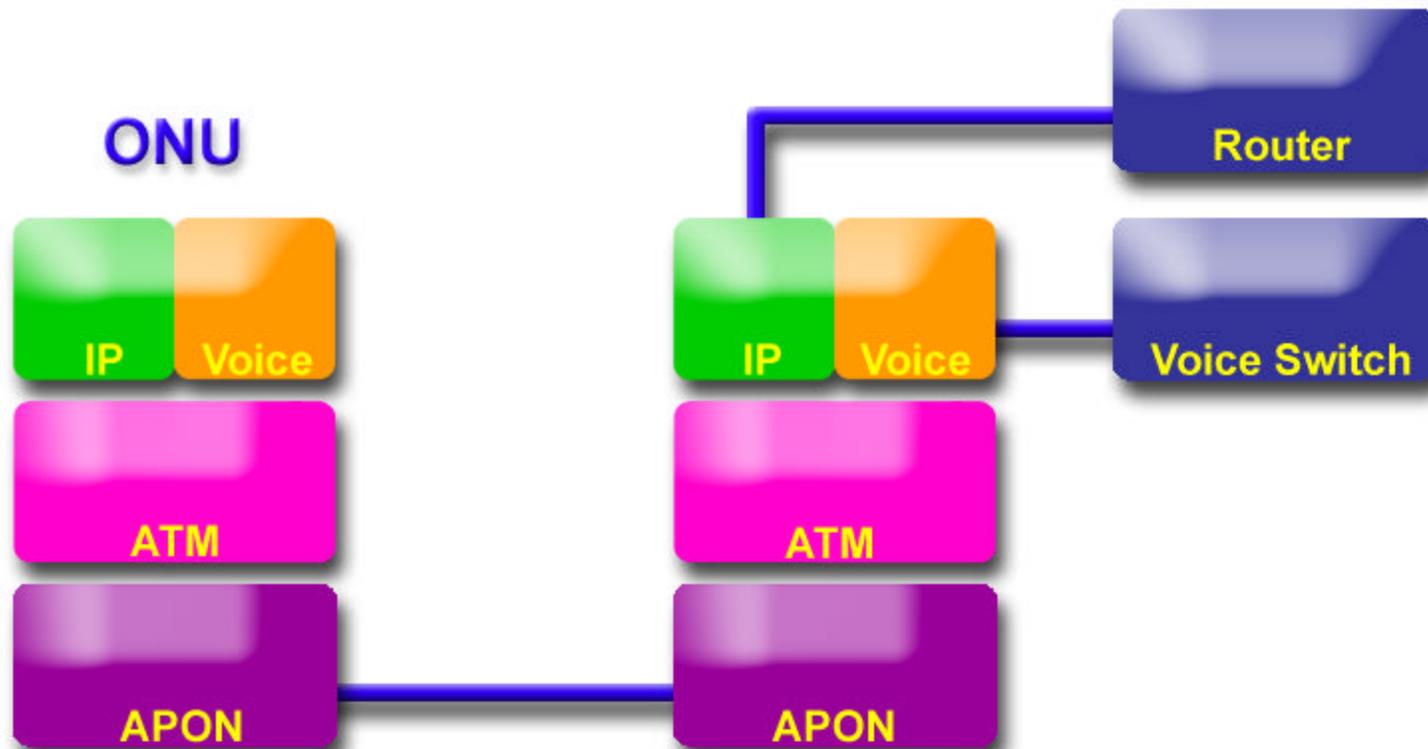
- **New metro solution are Ethernet / IP based or SONET and not on ATM.**
- **Reduce maintenance and configuration costs.**
- **Reduce overhead.**
- **Minimizing cost of C.O based multiservice by using Ethernet based C.O switches solution.**
- **Define new cost optimize Ethernet based framing mechanism for last mile**
- **Must support legacy services for today network**
- **Provide migration for all Ethernet IP based services**



- **New metro solution are IP based or SONET and not on ATM.**
- **Ethernet and IP based system reduce maintenance and configuration costs.**
- **Reduce overhead.**

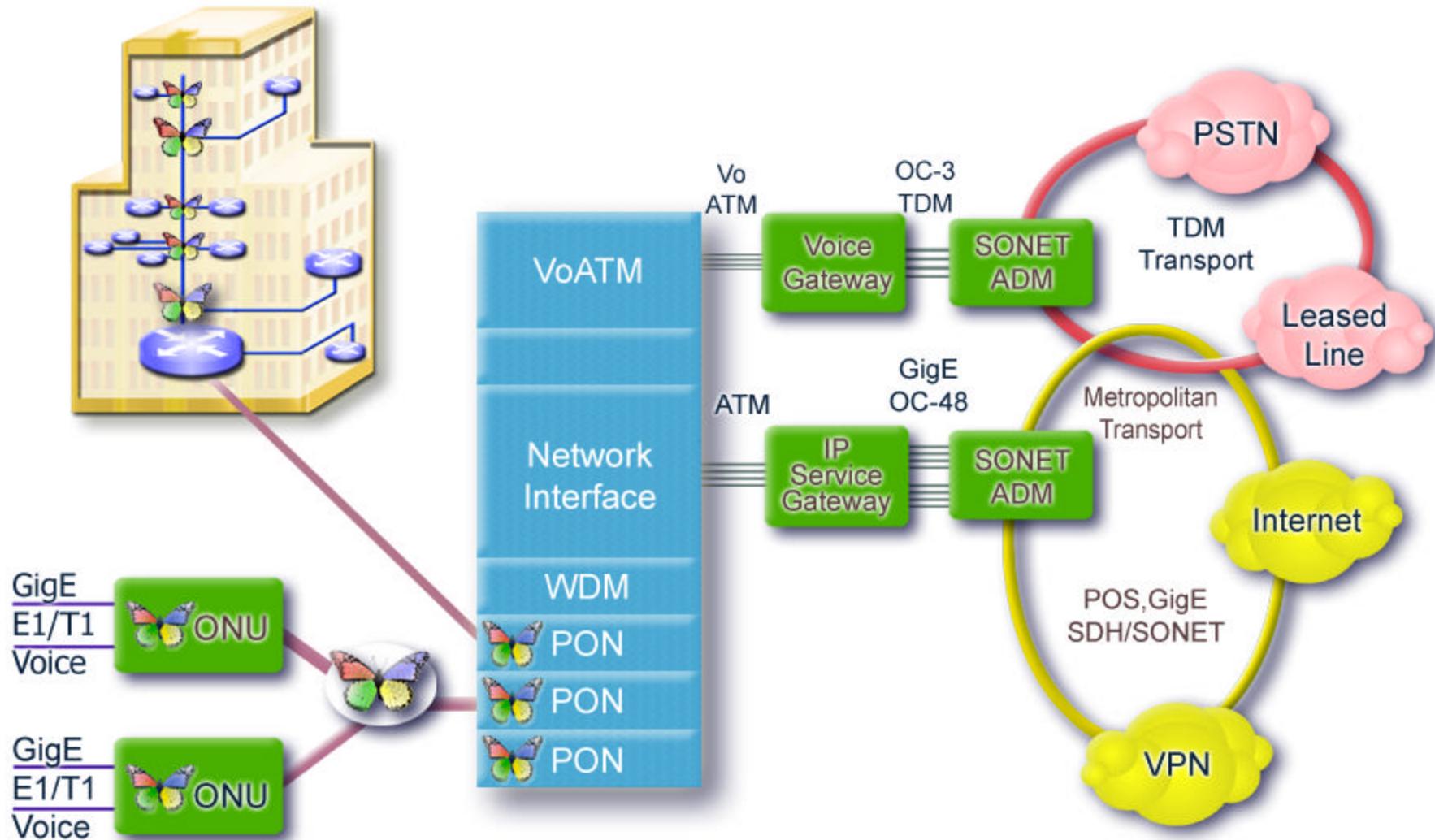


Voice+IP Transport APON



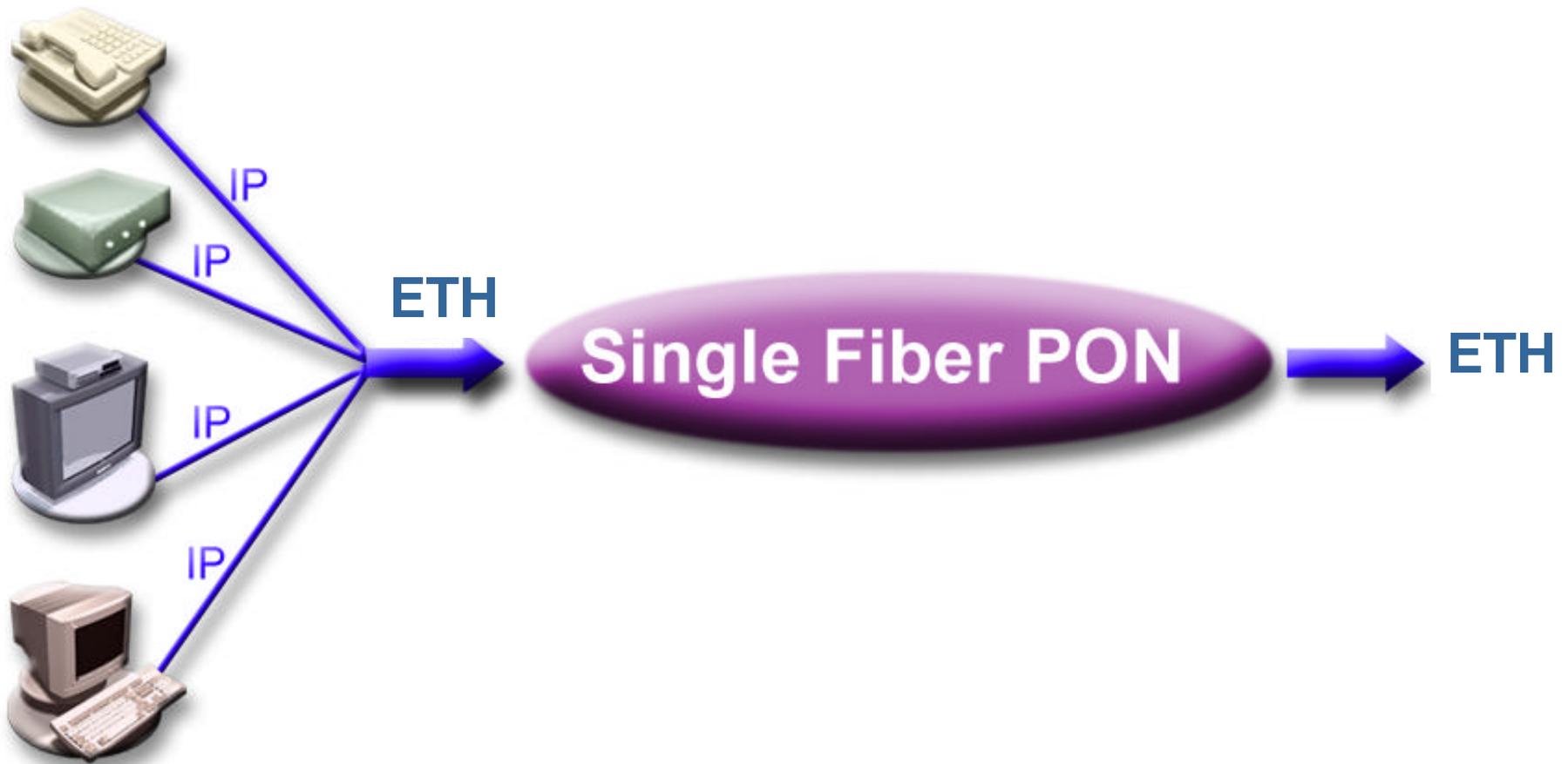


Multi Service APON Solution





Integrated (convergent) Services in the Latter Days





The Services Today



PCM, TDM



ATM



Analog, Cable



Ethernet

**Unfortunately.....
Most devices do not
emit IP packets.**



Alternative architectures for Multi-service Provisioning

ETH

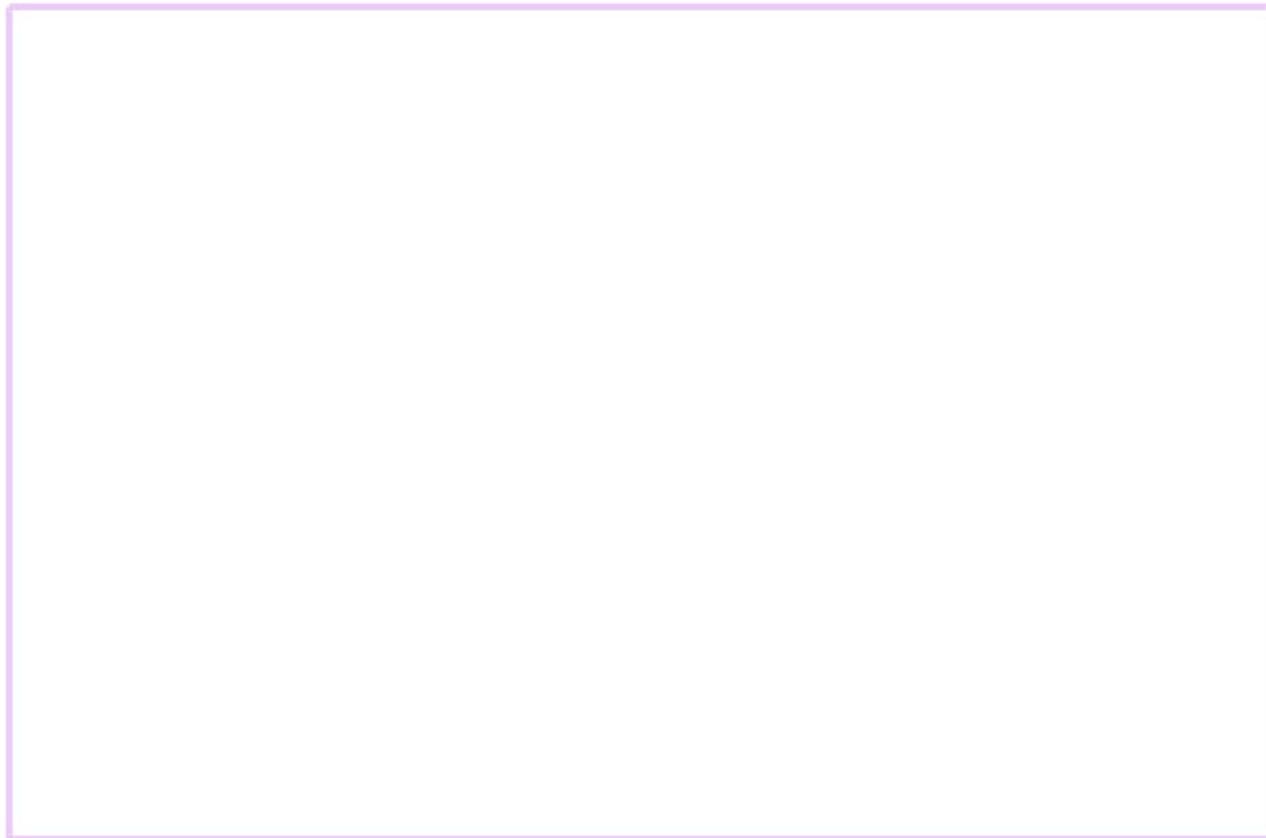
ETH

Voice

Voice

ATM

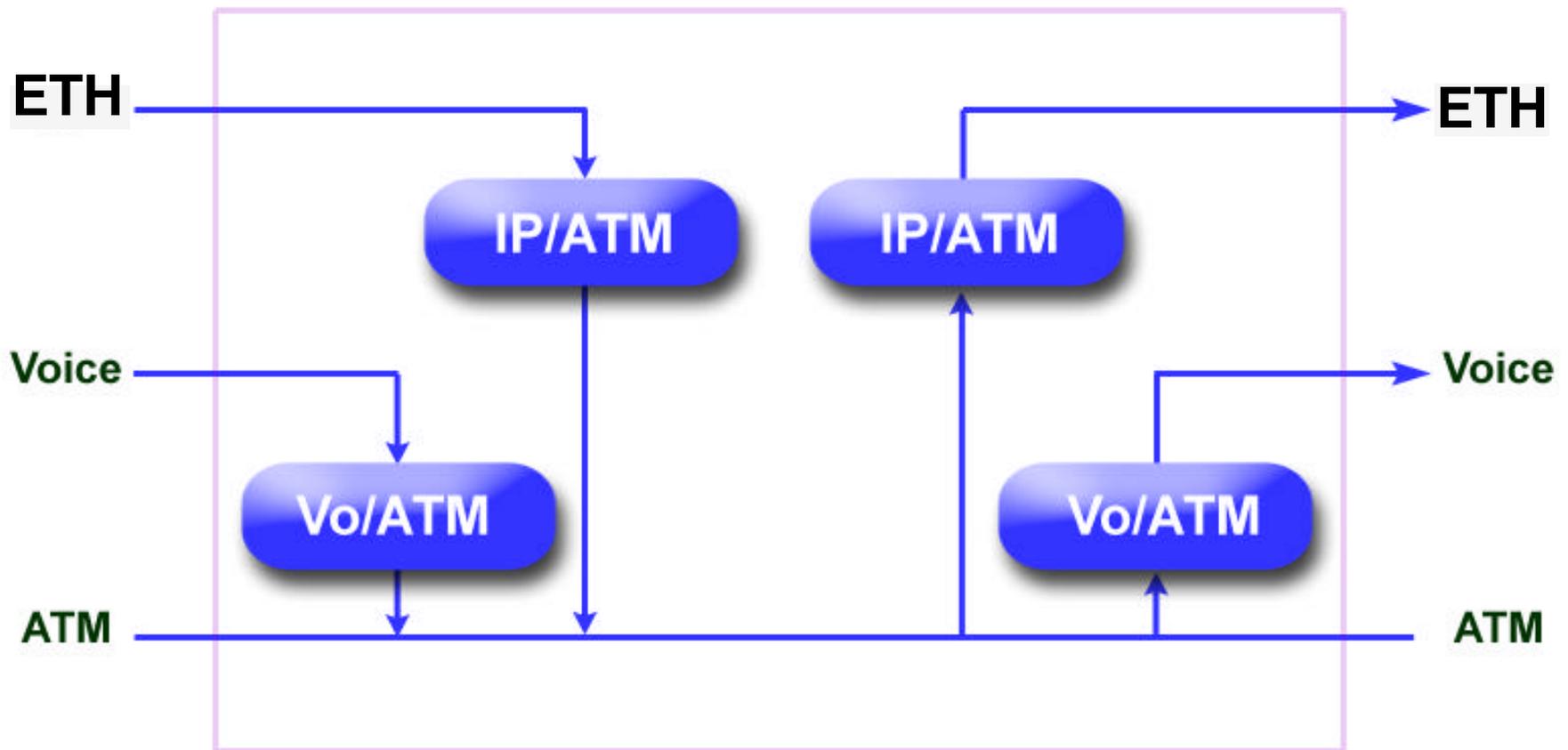
ATM





Alternative architectures for Multi-service Provisioning

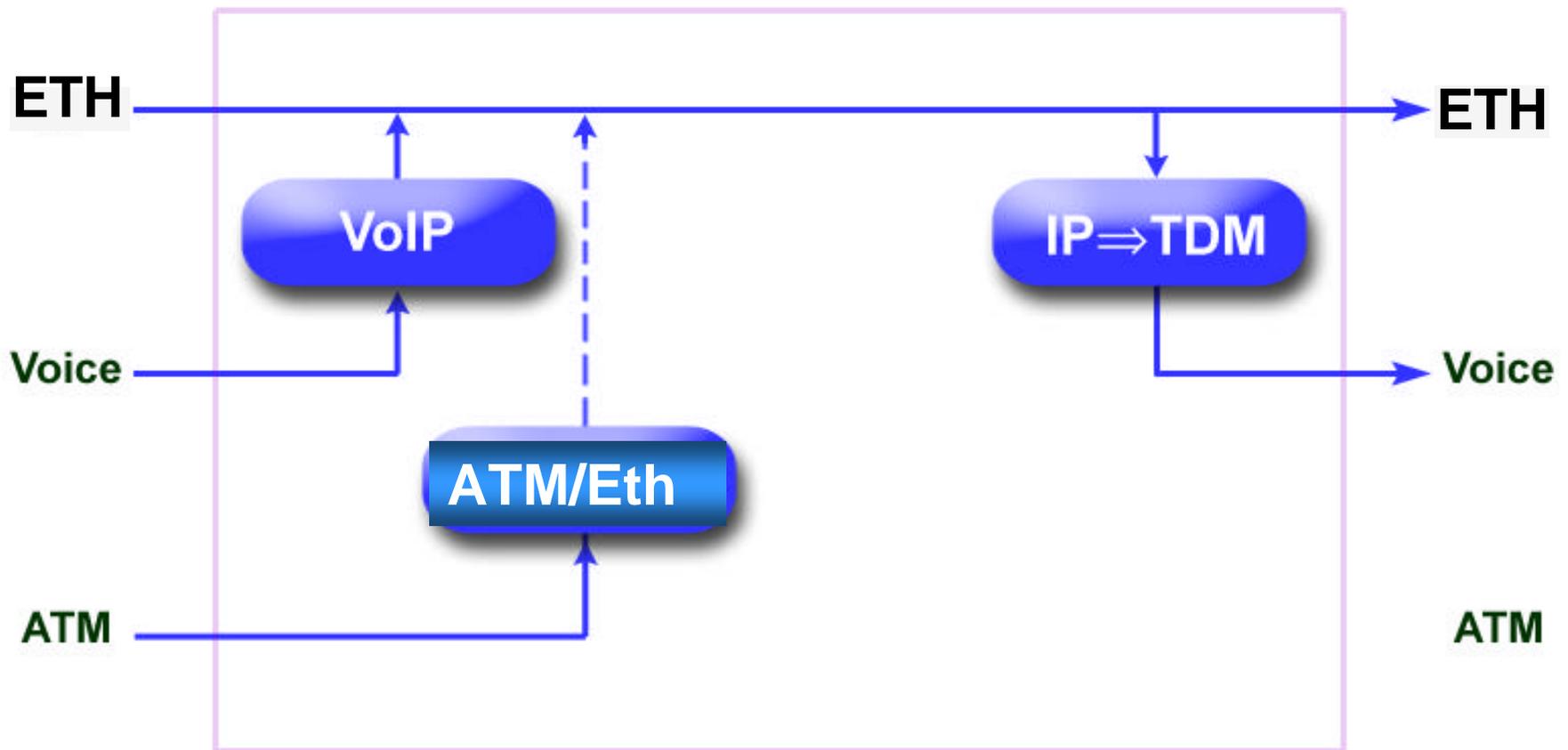
APON





Alternative architectures for Multi-service Provisioning

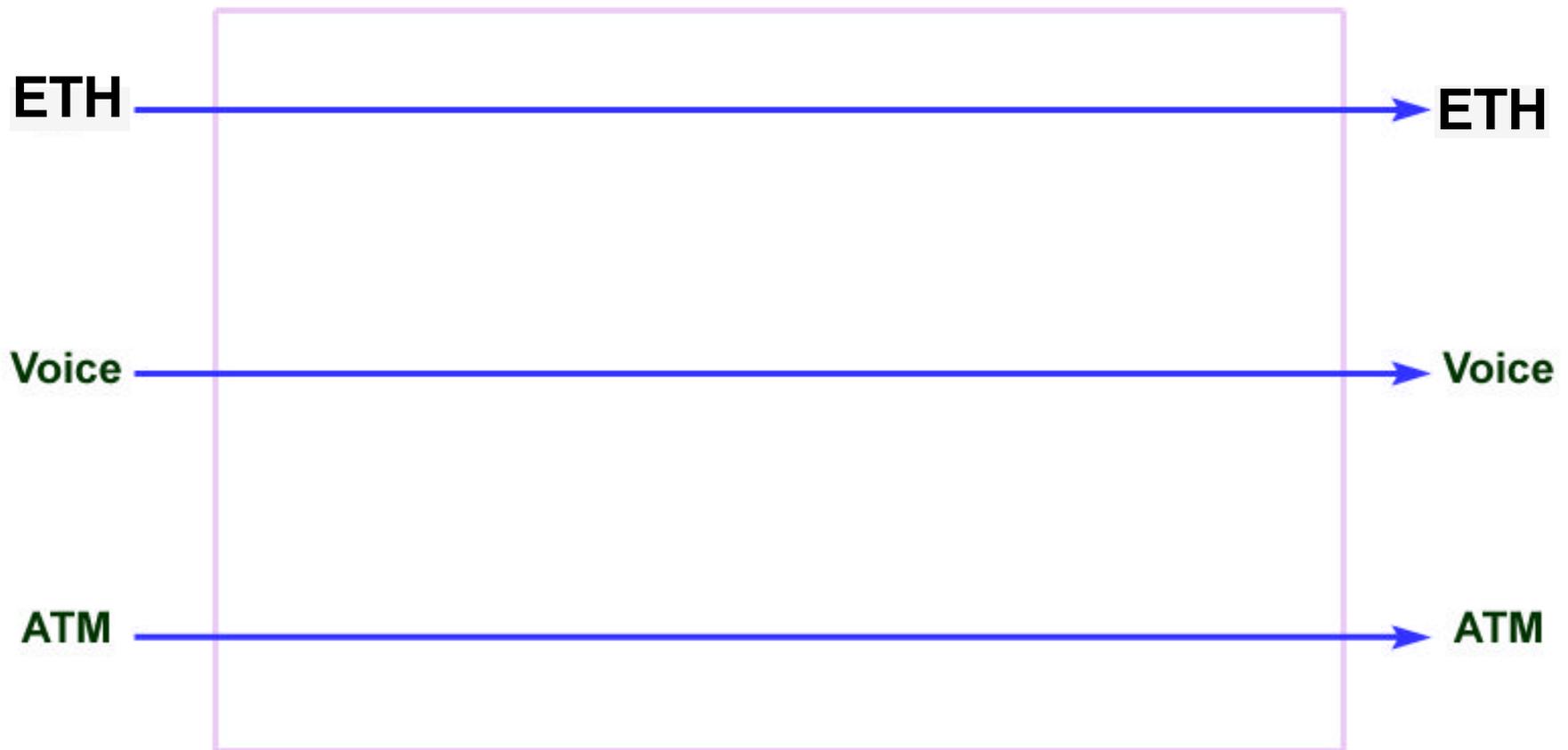
ePON





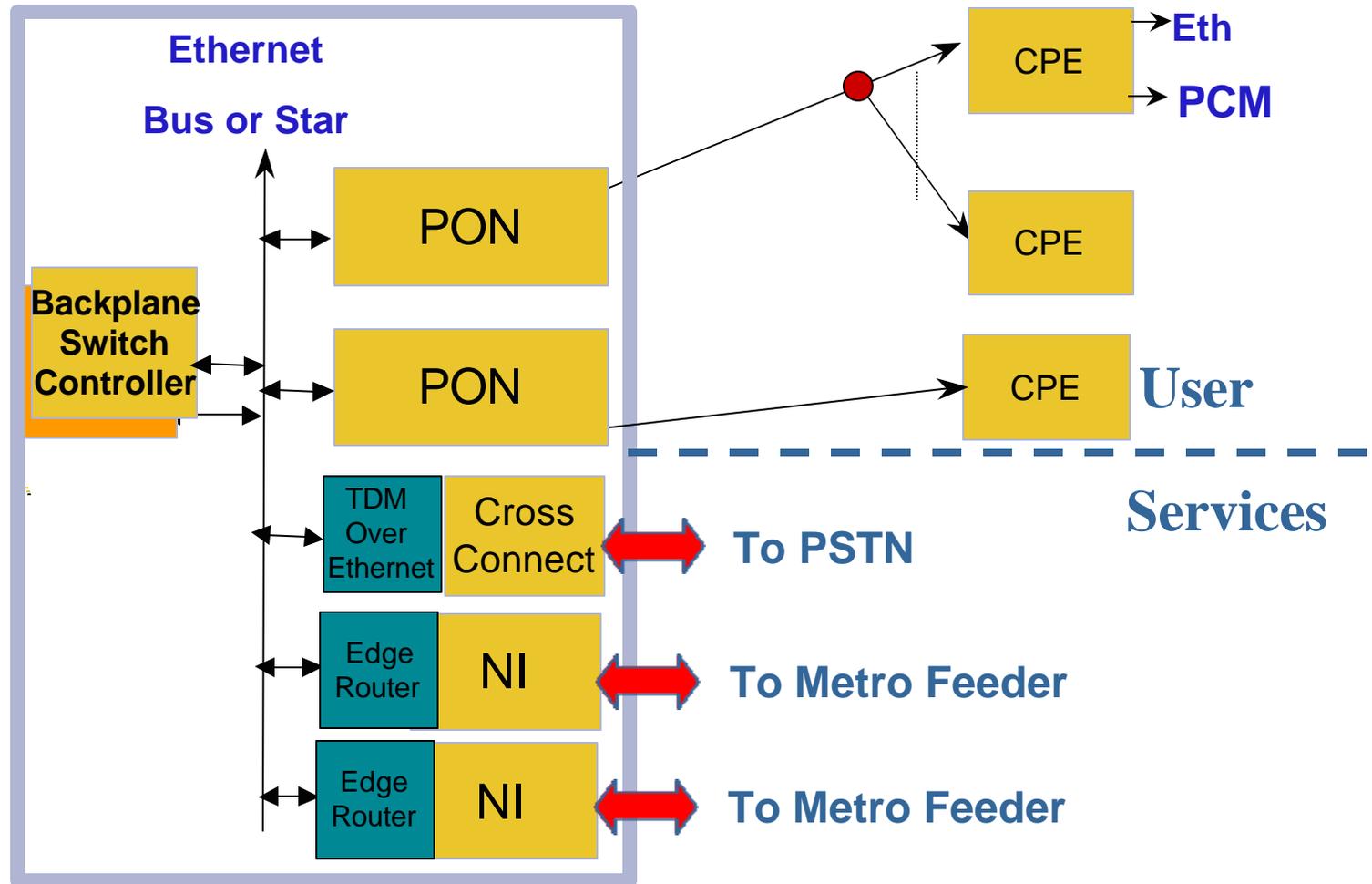
Alternative architectures for Multi-service Provisioning

msPON





OLT system architecture – Ethernet switch

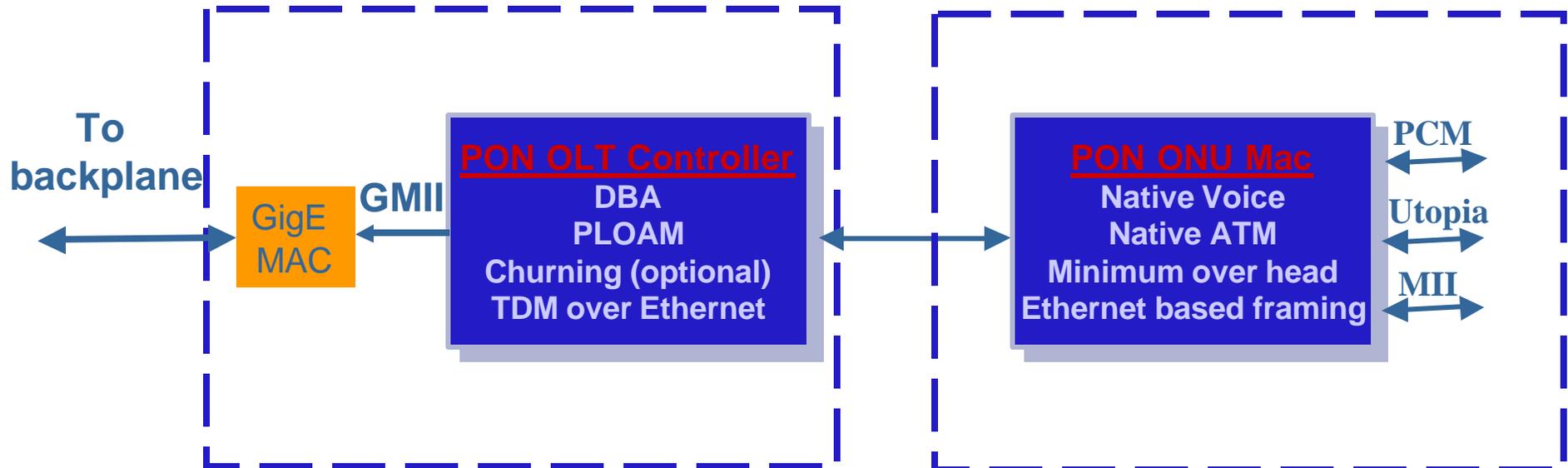




Multi service Ethernet PON solution

PON OLT card

PON ONU





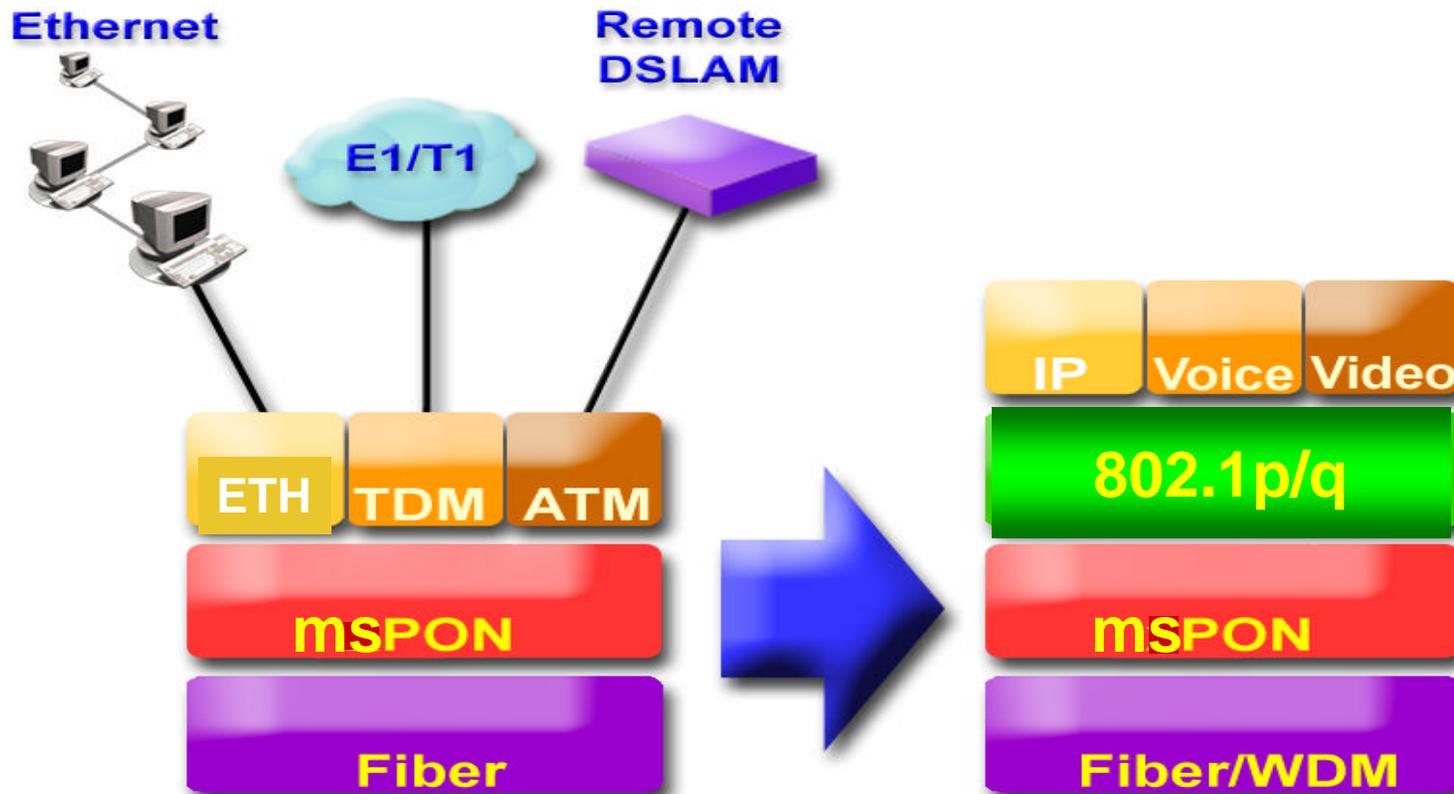
The msPON framing

- **Ethernet centric solution**
- **No translation needed for legacy service at the user side**
 - Reduce the CPE cost
 - Minimal maintenance
 - Minimal jitter and maximum QoS
- **Maximum flexibility at the C.O**
- **Ethernet only solution at the C.O, using PCM over Ethernet**
- **Multi Service which deals with all services**



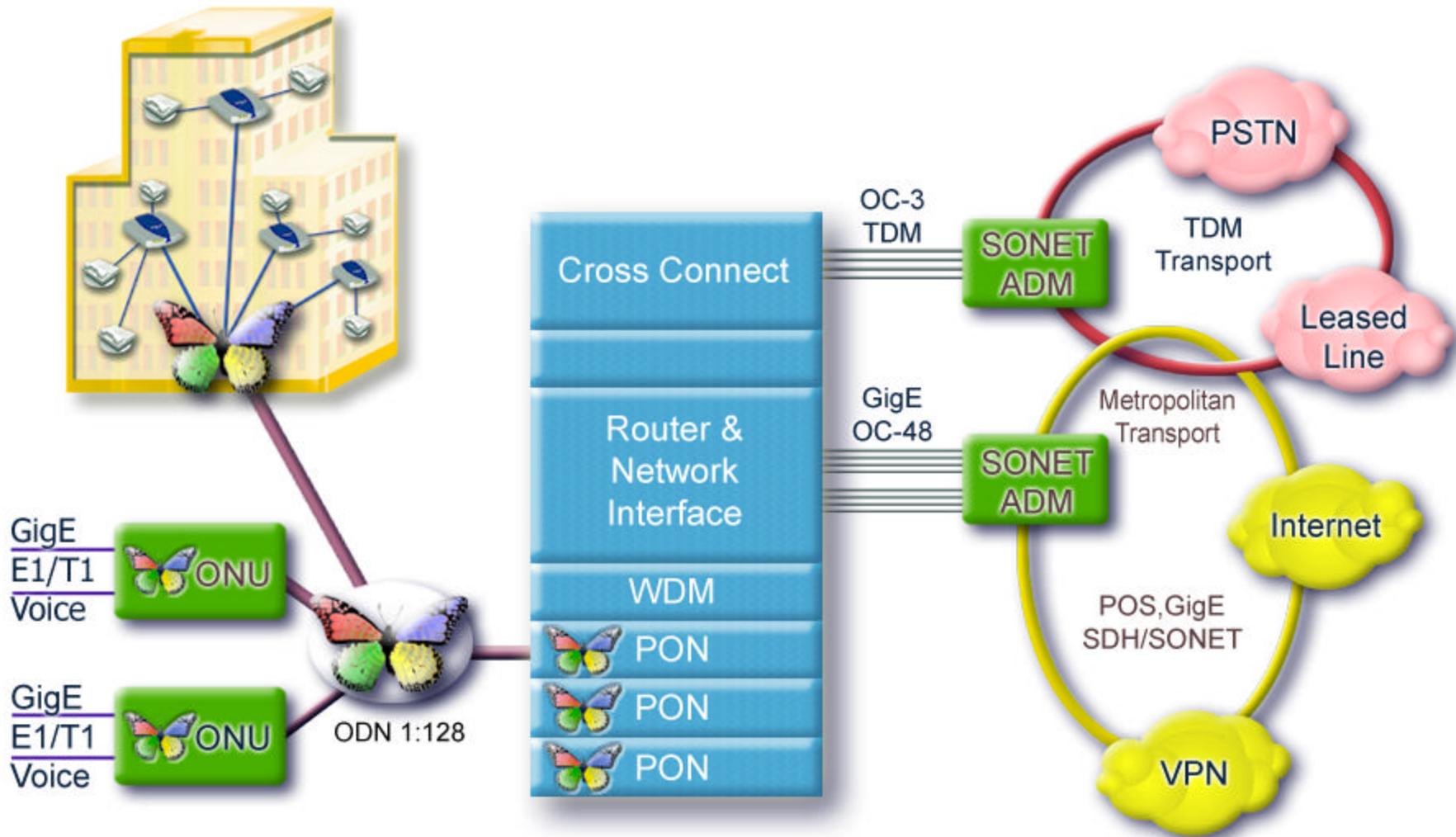
Etherent+TDM+ATM over msPON

msPON offers an evolutionary solution from today's complex networks to tomorrow's all optical, multi-service IP-based network





Multi Service msPON Solution





Broad Light

For details:

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